

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LAUREL LAKE	Lake Area (ha): 62.73
Town: FITZWILLIAM	Maximum depth (m): 13.4
County: Cheshire	Mean depth (m): 6.1
River Basin: Connecticut	Volume (m ³): 3826000
Latitude: 42°44'16" N	Relative depth: 1.5
Longitude: 72°09'09" W	Shore configuration: 1.25
Elevation (ft): 1099	Areal water load (m/yr): 2.50
Shore length (m): 3500	Flushing rate (yr ⁻¹): 0.40
Watershed area (ha): 310.8	P retention coeff.: 0.78
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

28 January 1993

29 July 1992

DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOLENIA 50%	CHRYSOSSPHAERELLA 95%
	#2	DINOBRYON 25%	
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			425
CHLOROPHYLL-A (µg/L)			4.93
DOM. ZOOPLANKTON (% TOTAL)	#1	KELICOTTIA 62%	KERATELLA 26%
	#2	KERATELLA 12%	NAUPLIUS LARVA 19%
	#3	NAUPLIUS LARVA 10%	
ROTIFERS/LITER		87	54
MICROCRUSTACEA/LITER		15	28
ZOOPLANKTON ABUNDANCE (#/L)		111	140
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			5.8
BOTTOM DISSOLVED OXYGEN (mg/L)		10.5	0.4
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		< 10
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 6.8
Hypolimnion volume (m³): 339000
Anoxic volume (m³): 145500

CHEMICAL:

Lake: LAUREL LAKE

Town: FITZWILLIAM

	28 January 1993		29 July 1992		
DEPTH (m)	4.0	8.0	3.0	7.0	10.0
pH (units)	6.3	5.1	6.8	6.4	5.9
A.N.C. (Alkalinity)	2.9	1.3	3.6	3.4	3.5
NITRATE NITROGEN	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
TOTAL KJELDAHL NITROGEN	0.11	0.24	0.10	0.10	0.10
TOTAL PHOSPHORUS	0.006	0.006	0.005	0.008	0.009
CONDUCTIVITY (μ mhos/cm)	47.2	48.7	47.0	47.2	49.1
APPARENT COLOR (cpu)	8	10	12	12	16
MAGNESIUM			0.46		
CALCIUM			2.1		
SODIUM			5.0		
POTASSIUM			0.65		
CHLORIDE	9	9	8	8	8
SULFATE	5	5	5	4	5
TN : TP	18	40	20	13	11
CALCITE SATURATION INDEX			3.7		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O. S.D. PLANT CHL TOTAL CLASS

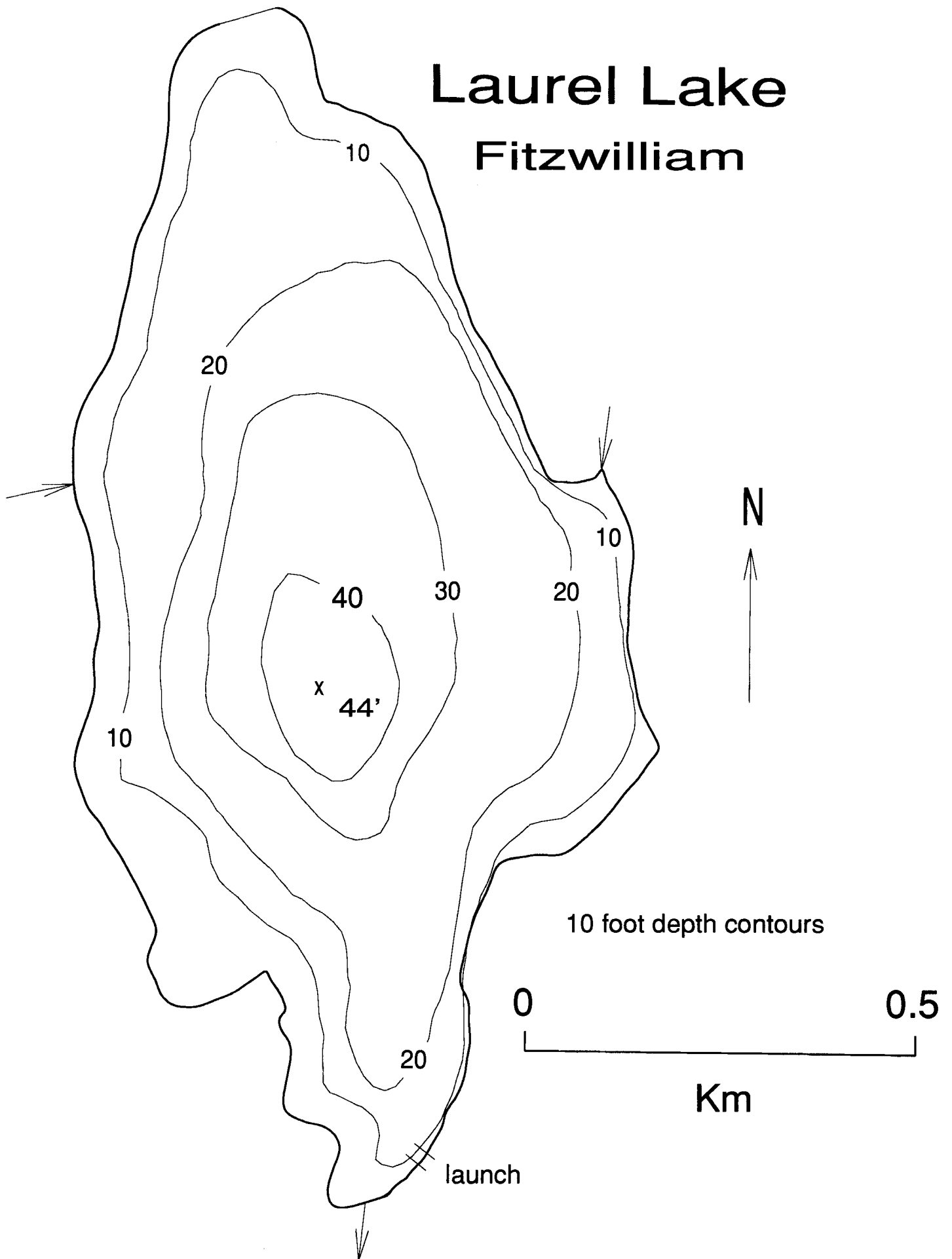
4	1	1	1	7	Meso.
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COMMENTS:

1. Also known as South Pond.
2. Good public boat launch site located at the outlet end.
3. Merismopedia (35%) and Chroococcus (15%) were the dominant wholewater phytoplankton genera. Dominant classes were blue-greens (50%) and diatoms (20%). Unidentified small cells -- probably from broken-up colonial forms -- were abundant throughout the sample but were not counted.

Laurel Lake

Fitzwilliam



[illegible]

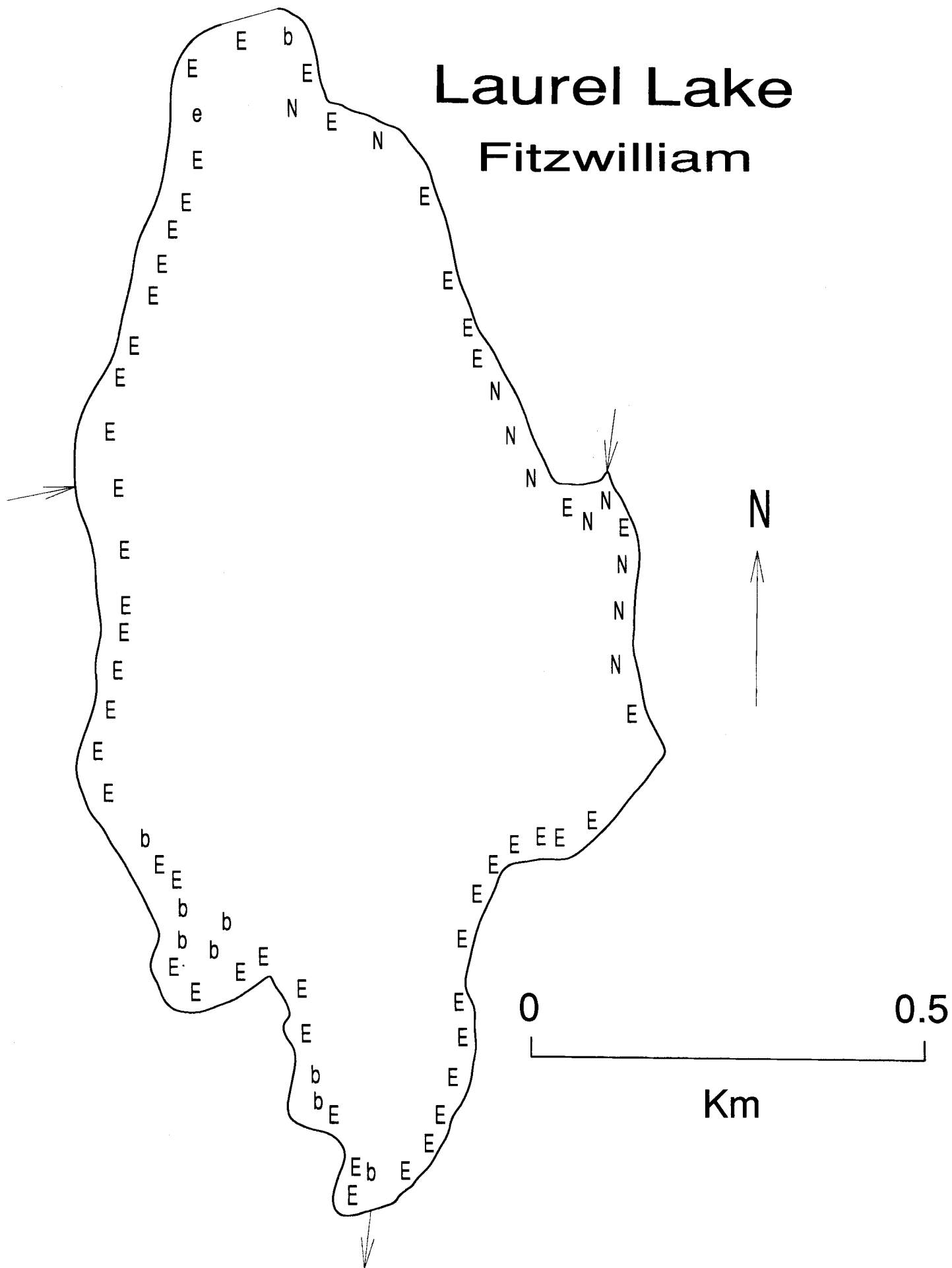
TOWN: FITZWILLIAM
WEATHER: SUNNY, PARTLY CLOUDY

[illegible]

COMMENTS :

*Dissolved oxygen values are in mg/L

Laurel Lake Fitzwilliam



AQUATIC PLANT SURVEY

LAKE: LAUREL LAKE	TOWN: FITZWILLIAM	DATE: 07/29/92
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TOWN: FITZWILLIAM

DATE: 07/29/92

[illegible]

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Pipewort was present around much of the shoreline but, because of its sparse growth habit, was rated sparse to scattered.